

Aircraft Operations Division User's Guide	JSC Reduced Gravity Program User's Guide	
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6.4 USER PROCEDURES

6.4.1 Test Request Procedures

First, contact the Reduced Gravity Office directly to discuss feasibility, to establish tentative dates, and to answer any specific questions.

Reduced Gravity Office, Ellington Field
Mail Code CC43, Building 993
Houston, Texas 77034
Phone 281-244-9874 fax 281-244-9500

The schedule priority is set on a first-come, first-served basis. Requests for special services/schedules are individually considered on the basis of Space Shuttle schedule priority, benefit to NASA, and legitimate requester time constraints.

A formal request for reduced gravity test support must be submitted by new users in writing to:

NASA Johnson Space Center
Attention: CA/Director, Flight Crew Operations
Houston, Texas 77058

The request should be submitted as soon as the requirement is firm. In order to ensure your time requirements can be met, the request should be submitted no less than six months prior to the desired flight date.

Two copies of an initial test request should be submitted to the Reduced Gravity Office a minimum of three months prior to flight and should contain general information describing the following:

1. Test objectives
2. Desired schedule (exact flight dates will be determined later)
3. Brief description of the test and associated test equipment
4. Number of test personnel required for flight and a description of the requirement for each individual's presence
5. Special support required or constraints, including security classification of project, if applicable
6. Preliminary Hazard Analysis identifying hazards and controls (any format is acceptable)
7. Names, addresses, and phone numbers of contacts

The initial test request will be screened by a representative of the JSC Institutional Review Board (IRB) who will determine if the planned test will require the involvement of the JSC IRB. The test developer and the Reduced Gravity Office will be notified of their decision.

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6.4.2 Human Research Protocol

Test developers who plan research involving human test subjects, animals, or biological tests must obtain approval from the JSC IRB.

Twenty copies of a completed Human Research Master Protocol (see Appendix C) must be submitted to the JSC IRB at least six weeks prior to the proposed flight date. This protocol must include the equipment safety certification, which is described in the following section, and applicable signed consent forms from each subject which are included in Appendix D.

The JSC IRB meets on the first and third Thursday of each month and will inform the test developer of approval and/or required changes. Documentation as outlined in Appendix C should be submitted to:

JSC Institutional Review Board
Mail Code SA
Lyndon B. Johnson Space Center
Houston, Texas 77058

6.4.3 Test Equipment Data Package

The test equipment data package must be submitted to the Reduced Gravity Office at least four weeks prior to flight. This documentation must include the test plan, engineering drawings and schematics, structural analysis, electrical load analysis, and an analysis of any identifiable hazards. The test plan should contain the following:

1. Cover page with name of test and point of contact
2. Table of Contents
3. Synopsis.
4. Test objectives.
5. Test description.
6. Equipment description (narrative, drawing, schematics, photographs, block diagrams, etc.)
7. Structural load analysis.
8. Electrical load analysis (if applicable).
9. Pressure vessel certification (if applicable).
10. In-flight test procedures (checklist type is required).
11. Parabola requirements, number, and sequencing.
12. Test support requirements, ground and flight.
13. Data acquisition system.
14. Test operating limits or restrictions.
15. Proposed manifest for each flight.
16. Photographic requirements.
17. Hazard analysis including Material Safety Data Sheet (MSDS) for hazardous materials.

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18. Safety certification (if applicable).

Item 18, the safety certification, is a signed statement from the providing organization indicating that the test developer has met and complied with all applicable safety standards. Four copies of the test equipment data package should be submitted to the Reduced Gravity Office no later than four weeks prior to flight. The Reduced Gravity Office will distribute copies to the appropriate NASA offices (Safety, Pressure Systems, Medical Operations, etc.) for review.

Test developers are urged to read the Hazard Analysis Guidelines (Appendix E).

6.4.4 Test Personnel Data

A copy of the physical exam results and the physiological training record for each person must be received at the following address at least three weeks prior to the flight date:

NASA Johnson Space Center
Physiological Training Officer
Mail Code SD25
Houston, TX 77058

Or FAX to Mr. Mike Fox at 281-483-3397.

All personnel, with the exception of Category I personnel as described in Appendix F, with a demonstrated necessity to participate in reduced gravity flight, must provide the results of a Federal Aviation Administration (FAA) Third-class flight physical reported on JSC Form 8500 or FAA Form 8500-8 (see Appendix F), and dated within the previous three year period. Additionally, all test personnel must meet height and weight standards set forth in Appendix F. Category I personnel must have successfully completed an Air Force Class III flight physical within the previous twelve months.

Requirements for medical certification of crew members and human test subjects will be met by successful completion an annual NASA flight physical.

6.4.5 Physiological Training Requirements

All personnel, including Category I personnel, with a demonstrated necessity to participate in reduced gravity flight must have received physiological training within the last three years. Physiological training will include, as a minimum, altitude chamber hypoxia demonstration and appropriate classroom instruction. See Appendix G for details of physiological training. Details of physiological training requirements may be obtained from

NASA Johnson Space Center
Physiological Training Officer
Mail Code SD25
Houston, TX 77058

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Note

Failure to submit the required documentation for each person on time will preclude that person from flying!

Foreign nationals are required to contact their respective embassies in Washington, D.C., and provide them with the purpose and dates of their visit and full names of all personnel who will require access to JSC. The Reduced Gravity Office should be listed as the JSC point of contact. The embassies must receive permission for the visit from the International Relations Office, NASA Headquarters, Mail Code IR. JSC will then receive authorization from NASA Headquarters to issue badges.

Resident non-U.S. citizens who have a Resident Alien Card ("Green Card") may receive their badges directly from JSC upon presentation of this card.

6.4.6 User's Timeline Summary

A user's checklist is provided in Appendix G to assist test developers in submitting the required documentation on time. A summarized timeline, based on the tentative date of the test developer's first flight, is provided below.

1. Six months prior to flight, a formal test request is required from new users. Refer to paragraph 6.4.1.
2. Three months prior to flight, two copies of the initial test request are required from all users, and a completed cost-reimbursable agreement is required from commercial users. Refer to paragraphs 6.4.1 and 6.7, respectively.
3. Six weeks prior to flight, twenty copies of a completed Human Research Master Protocol are required from test developers who plan research involving human test subjects. Refer to paragraph 6.4.2.
4. Four weeks prior to flight, four copies of the test equipment data package are required from all users. Refer to paragraph 6.4.3.
5. Three weeks prior to flight, test personnel data is required from all users. Refer to paragraph 6.4.4.